Comment on "Cutaneous viral infections in patients after kidney transplantation: risk factors"

To the Editor I am writing with regards to the article by Sułowicz et al.[1] I would like to thank the authors for raising the issue of infectious dermatological complications linked to immunosuppressive therapy after solid organ transplantation. The authors investigated the epidemiology of skin viral infections among kidney transplant recipients in great detail. Skin problems, of which skin viral infections are the most common, seriously affect the quality of life of transplant recipients. Skin infection is not only a serious medical problem but also a cosmetic nuisance. In our studies, patients highlighted the cosmetic aspect as one of the most important problems affecting their quality of life.

The study[1] involved a large group of 486 patients of an outpatient clinic at the Department of Nephrology, Jagiellonian University Hospital, Kraków, Poland. They underwent a detailed subjective and physical examination for the presence of any skin lesions and potential risk factors for their development. A viral cutaneous lesion was observed in 189 individuals (38.9%), of which 98.9% were viral warts. Two patients had herpes zoster infection. Cutaneous viral lesions were observed mainly in men, older patients, and with longer follow-up period after transplantation. The most common location of the lesion were the hands and feet. The model of a careful follow-up after diagnosing a skin viral infection, as proposed by the authors,[1] can also be successfully applied in skin cancer (a leading type of neoplasms in recipients).

Another aspect that drew the authors' attention was the effect of the immunosuppressive regimen on the incidence of viral cutaneous lesions. It was proved that individuals treated with cyclosporine A and azathioprine are especially prone to skin viral infection. On the other hand, tacrolimus and mycophenolate mofetil were described to cause those lesions significantly less frequently. The authors used complex and exact statistical methods to describe the data. It will be even more interesting to look at the blood immunosuppressant level rather than at the daily doses. Another interesting issue is induction therapy with mono- and polyclonal antibodies. In many studies, it seems to be an important risk factor for later viral complications including infection with potentially oncogenic viruses. For this reason, Muromonab-CD3 (Orthoclone OKT3) is no longer used. In my opinion, using T-cell depletion therapy requires the monitoring of the absolute CD3 cell count by flow cytometry. Maintaining the CD3 level between 50 and 80 cells/mm^3 could potentially prevent later viral and neoplastic complications. This hypothesis requires more accurate studies in the future. Another interesting finding is that the use of azathioprine was a risk factor of skin viral infection, and the authors' view on this issue would be of particular interest.

Skin lesions after solid organ transplantation are one of the most common side effects of an immunosuppressive therapy. It is of great importance to examine any new lesion because the incidence of skin malignancies is elevated in this population of patients. The authors did not mention whether any of the lesions was neoplastic or whether it progressed to a dysplastic lesion during the follow-up period. This issue seems to be crucial because skin neoplasms in the population of solid organ transplant recipients are particularly malignant. Another aspect that could have been reported in greater detail is the number of skin viral lesions characterized in particular individuals and whether there was any significance between the time after transplantation or immunosuppressive regimen and the number of viral warts. Additionally, viral warts on the hands could have been described more precisely. A number of authors differentiate between the warts on the back of the hands (which are more common) and palms (which are more painful and troublesome).[2]

In 2003, Schmook et al.[3] reported that the adequate treatment for multiple warts caused by human papillomavirus in organ transplant recipients needs to be effective because warts persist over years and the rate of spontaneous remission is extremely low. Moreover, some of these viral warts may present with atypical histological

features and may progress to squamous cell carcinoma.[4] Shmook et al.[3] described the available treatment methods and proposed a promising novel therapy with imiquimod. Sułowicz et al.[1] did not present data on the treatment of viral warts and did not address the issue of whether the treatment was necessary in any individual, what was the treatment administered, if any, and what was its effectiveness.

The final issue that has recently drawn the attention of researchers in many disease states is the quality of life. The authors[1] discussed this in the introduction, but did not report any data. In 2012, Zachariae et al.[2] published a study on Danish kidney transplant patients, in which they examined the quality of life of individuals suffering from viral warts. They suggested the use of the Dermatology Quality of Life Index.[5] Sułowicz et al.[1] did not report whether patients with a viral cutaneous infection complained of a decreased quality of life and whether they thus demonstrated a stronger motivation to receive an adequate treatment.

Author name and affiliation Piotr Przybyłowski, Department of Cardiovascular Surgery and Transplantology, Jagiellonian University Medical College, John Paul II Hospital, Kraków, Poland

Corresponding author Piotr Przybyłowski, MD, PhD, Klinika Chirurgii Serca, Naczyń i Transplantologii, Uniwersytet Jagielloński, Collegium Medicum, ul. Prądnicka 80, 31-202 Kraków, Poland, phone: +48-12-614-30-75, fax: +48-12-614-30-72, e-mail: piotr.przybylowski@uj.edu.pl

Conflict of interest The authors declare no conflict of interest.

REFERENCES

1 Sułowicz J, Wojas-Pelc A, Kuźniewski M, et al. Cutaneous viral infections in patients after kidney transplantation: risk factors. Pol Arch Med Wewn. 2013; 123: 686-692.

2 Zachariae C, Sand C, Hansen JM, et al. Warts in a cohort of Danish kidney transplanted patients: impact on quality of life. Acta Derm Venereol. 2012; 92: 615-618.

3 Schmook T, Nindl I, Ulrich C, et al. Viral warts in organ transplant recipients: new aspects in therapy. Br J Dermatol. 2003; 149 (Suppl 66): 20-24.

4 Blessing K, McLaren KM, Benton EC, et al. Histopathology of skin lesions in renal allograft recipients – an assessment of viral features and dysplasia. Histopathology. 1989; 14: 129-139.

5 Finlay AY, Khan GK. Dermatology Life Quality Index (DLQI) – a simple practical measure for routine clinical use. Clin Exp Dermatol. 1994; 19: 210-216.